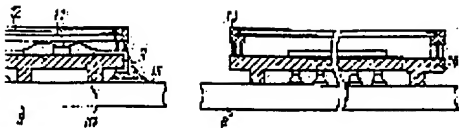


PATENT ABSTRACTS OF JAPAN



(11)Publication number : 07-131586

(43)Date of publication of application : 19.05.1995

(51)Int.CI.

H04N 1/028

(21)Application number : 05-270517

(71)Applicant : RICOH CO LTD

(22)Date of filing : 28.10.1993

(72)Inventor : OUE YUJI

(54) READER

(57)Abstract:

PURPOSE: To improve assembly position precision and to prevent the intrusion of external unnecessary light by precisely positioning a CCD sensor IC package on a substrate through the use of a self alignment operation at the time of reflow soldering.

CONSTITUTION: Plural projections 10 are provided at the bottom of the lower ceramic case 14 of CCD sensor IC 7, and multiple connection electrodes 9 are provided from the side of the case 14 to the bottom. The respective projections 10 hold height from the upper surface of the substrate 8 of sensor IC 7 to a prescribed value. Consequently, IC 7 is set on the upper surface of the substrate 8 and soldering is executed by a reflow soldering method. Thus, the self alignment operation at the time of reflow soldering between the electrode 9 and a corresponding soldering pad 15 is used and the loading of IC 7 with high fitting position precision can be realized.

LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]
[Number of appeal against examiner's
decision of rejection]
[Date of requesting appeal against
examiner's decision of rejection]
[Date of extinction of right]

Copyright (C); 1998,2000 Japanese Patent Office